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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Ex Parte Presentations in
ET 16-191 and RM-11779

Dear Ms. Dortch:

On April 11, 2017, Jonathan Edwards, Donald Everist, Thomas King, and Robert Weller of the Association of Federal Communications Consulting Engineers (“AFCCE”) met with Chairman Ajit Pai and Alison Nemeth concerning the above-reference proceedings. The attached presentation was distributed at the meeting.

AFCCE expressed its concern that radio communications services, both licensed and unlicensed, were entering a “world of pain” due to increasing levels of radiofrequency noise and urged Chairman Pai to direct the FCC’s Technological Advisory Council (“TAC”) to prioritize development of actionable recommendations to address this issue. AFCCE summarized the comments submitted to the TAC’s inquiry on RF Noise (ET Docket 16-191), explaining that commenters identified a small number of noise sources as culprits and that those same sources were similarly identified by independent research at the ITU. Two solutions to the noise problem are (1) to increase power to overcome noise and (2) to reduce the level of the noise itself. AFCCE explained that increasing power actually increases noise levels, and devices comprising the so-called “Internet of Things” (“IoT”) will likely have little or no ability to increase power. In short, if the noise situation is not addressed the highly-anticipated IoT may fall well short of expectations. The FCC last examined its Part 15 and 18 emission limits in 1985 and the underlying limits date from years earlier.

AFCCE also expressed concern that lack of adequate technical rule enforcement is leading to both increased unlicensed operations and increasingly non-compliant operations, both of which frustrate rule-abiding operators and challenge the ability to share spectrum. As Lawrence Strickling, former head of NTIA, said in 2015, “without adequate enforcement, it won’t matter how much spectrum we make available for sharing.” AFCCE urged the Commission to expedite its promised online interference complaint portals and re-establish programs of random inspections and post-marketing sampling and measurements to assess and monitor the state of



ASSOCIATION OF

FEDERAL COMMUNICATIONS CONSULTING ENGINEERS

WASHINGTON, D.C.

April 13, 2017

Page 2

compliance. The FCC's Sampling and Measurement Branch (in OET) became Auditing and Compliance Branch about 2004 and was eliminated about 2011. In the past, the FCC provided a handbook on troubleshooting interference. However, this handbook has not been updated in more than 20 years and does not include the noise contributors discussed herein. AFCCE also urges the FCC to update this book. A link to the FCC's last version of their Interference Handbook can be found at: <https://www.fcc.gov/document/fcc-interference-handbook-1993-edition>

Turning to AM Synchronous Boosters, AFCCE urged the Chairman to direct the FCC's Media Bureau to advance the extant Petition for Rulemaking (RM-11779, mis-labeled as "RM-1177" in the attached presentation) to a Notice of Proposed Rule-making to establish AM Synchronous Boosters as an authorized, secondary service under Part 74. During the pendency of that rule-making, AFCCE urged that existing AM Synchronous Booster operations should be allowed to continue.

In addressing the question presented by Chairman Pai as to how many stations are currently operating AM synchronous boosters Tom King agreed to provide a copy of their paper published in the Proceedings of the 2015 NAB Engineering Conference. Table 1 in this paper provides the answer to Chairman Pai's question. A copy of the paper has been provided as an addendum to this letter.

Finally, AFCCE presented new information concerning the potential impact of precise frequency operation of all AM stations in the U.S. Such "nationwide synchronous" operations can typically be enabled at very low cost (a few hundred dollars) and can substantially improve coverage areas of existing AM stations by eliminating annoying sources of interference.

AFCCE appreciates the opportunity to present its views directly to Chairman Pai and submits a copy of its presentation into the record of the relevant proceedings.

Respectfully submitted,

Jonathan Edwards, P.E.
AFCCE-FCC Liaison